



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0146; Directorate Identifier 2011-NM-115-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Bombardier, Inc. Model CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604 Variants) airplanes. This proposed AD was prompted by reports of deformation at the neck of the pressure regulator body on the oxygen cylinder and regulator assemblies (CRAs), and an electrical wiring harness in the area of the oxygen cylinder had no protective conduit sleeving. This proposed AD would require inspecting to determine if certain oxygen pressure regulators are installed and replacing oxygen CRAs containing pressure regulators that do not meet the required material properties. This proposed AD would also require inspecting for damaged wiring and repairing or replacing wiring if necessary. We are proposing this AD to prevent rupture of the oxygen cylinder, which in the case of cabin depressurization, oxygen would not be available when required; and to detect and correct unprotected wiring that could chafe against the oxygen system components or surrounding structure in the area, which could lead to electrical arcing and an oxygen-fed fire.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; e-mail thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>;

or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7318; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0146; Directorate Identifier 2011-NM-115-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

Transport Canada Civil Aviation (TCCA), has issued Canadian Airworthiness Directive CF-2011-11, dated May 25, 2011 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

During a routine inspection, deformation was found at the neck of the pressure regulator body on the oxygen Cylinder and Regulator Assemblies (CRA) of a BD-700-1A11 aeroplane.

An investigation by the vendor, Avox Systems Inc., revealed that the deformation was attributed to two (2) batches of raw material that did not meet the required tensile strength. This may cause elongation of the pressure regulator neck, which could result in rupture of the oxygen cylinder, and in the case of cabin depressurization, oxygen would not be available when required.

Although there have been no reported failures to date on any CL-600-2B16 aeroplanes, oxygen pressure regulators, Part Numbers (P/N) 806370-12, could be part of the affected batches.

It has also been found that the electrical wiring harness in the area of the oxygen cylinder has been installed without protection. Unprotected wiring could chafe against the oxygen system components or surrounding structure in the area, which could lead to electrical arcing and an oxygen fed fire.

This [TCCA] directive mandates [an inspection to determine if a certain oxygen CRA is installed and] the replacement of oxygen CRAs containing pressure regulators that do not meet the required material properties and to [do a general visual inspection of] and protect the affected wiring.

Corrective actions include repairing or replacing any damaged wiring. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

Bombardier, Inc. has issued Service Bulletin 605-24-005, dated January 31, 2011; and Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Differences Between This Proposed AD and the MCAI or Service Information

This proposed AD differs from the MCAI and/or service information as follows: The MCAI and service information do not specify corrective actions if damaged wiring is found; this proposed AD requires repairing or replacing any damaged wiring. This proposed AD also includes serial numbers (S/N) 5824 and subsequent in the applicability. Those airplanes are included in paragraph (j) of the proposed AD, which prohibits the installation of certain regulators.

Costs of Compliance

Based on the service information, we estimate that this proposed AD would affect about 72 products of U.S. registry. We also estimate that it would take about 1 work-hour per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$6,120, or \$85 per product.

In addition, we estimate that certain follow-on actions (wiring protection) would take about 2 work-hours and require parts costing \$0, for a cost of \$170 per product. We have no way of determining the number of products that may need these actions.

We have received no definitive data that would enable us to provide cost estimates for certain other on-condition actions (repairing or replacing damaged wiring) specified in this proposed AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:

Bombardier, Inc.: Docket No. FAA-2012-0146; Directorate Identifier 2011-NM-115-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model CL-600-2B16 (CL-601-3A, CL-601-3R, & CL-604 Variants) airplanes; certificated in any category; serial numbers 5701 through 5802 inclusive, 5804 through 5808 inclusive, 5810 through 5816 inclusive, 5819, 5822, 5823 and subsequent.

(d) Subject

Air Transport Association (ATA) of America Codes 24: Electrical power; and 35: Oxygen.

(e) Reason

This AD was prompted by reports of deformation at the neck of the pressure regulator body on the oxygen cylinder and regulator assemblies (CRAs), and an electrical wiring harness in the area of the oxygen cylinder had no protective conduit sleeving. We are issuing this AD to prevent rupture of the oxygen cylinder, which in the case of cabin depressurization, oxygen would not be available when required; and to detect and correct unprotected wiring that could chafe against the oxygen system components or surrounding structure in the area, which could lead to electrical arcing and an oxygen-fed fire.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Inspect and Replace the Oxygen CRA

For airplanes with serial numbers 5701 through 5802 inclusive, 5804 through 5808 inclusive, 5810 through 5816 inclusive, 5819, 5822, and 5823: Within 750 flight hours after the effective date of this AD, but no later than 6 months after the effective date of this AD, inspect the serial number of oxygen pressure regulators having part number (P/N) 806370-12, in accordance with the Accomplishment Instructions, Section 2.B.(3), of Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of the oxygen pressure regulator can be conclusively determined from that review.

(1) If any serial number is found that is listed in table 2 of Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011, before further flight, replace the affected oxygen CRA in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011.

(2) If any serial number is found that is not listed in table 2 of Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011, no further action is required by this paragraph.

(h) Inspection and Corrective Action of the Oxygen CRA Wiring Harness

For airplanes with serial numbers 5701 through 5778 inclusive, 5780 through 5796 inclusive, 5798, 5800 through 5802 inclusive, 5804, 5805, 5808, 5811, and 5813: At the compliance times specified in paragraphs (h)(1) and (h)(2) of this AD, do a detailed inspection for damaged wiring (i.e., signs of damaged insulation, abrasion, or chafing) of the electrical wiring harness for the oxygen CRA, and protect the electrical wiring harness, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 605-24-005, dated January 31, 2011. If any damaged wiring is found, before further flight, repair or replace any damaged wiring in accordance with a method approved by the Manager, New York Aircraft Certification Office (ACO), FAA; or Transport Canada Civil Aviation (TCCA) (or its delegated agent).

(1) For airplanes on which the oxygen CRA must be replaced as required by paragraph (g)(1) of this AD: At the time the oxygen CRA is replaced.

(2) For airplanes other than those identified in paragraph (h)(1) of this AD: Within 800 flight hours after the effective date of this AD.

(i) Credit for Actions Accomplished in Accordance with Previous Service Information

Actions accomplished before the effective date of this AD accordance with Bombardier Service Bulletin 605-35-001, dated January 31, 2011, are considered acceptable for compliance with the corresponding actions specified in this AD.

(j) Parts Installation

For all airplanes: As of the effective date of this AD, no person may install an oxygen pressure regulator (P/N 806370-12) having any serial number listed in table 2 of Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011, on any airplane, unless a suffix “-A” is beside the serial number.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax: 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) **Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(l) Related Information

Refer to MCAI Canadian Airworthiness Directive CF-2011-11, dated May 25, 2011, and the service bulletins identified in paragraphs (l)(1) and (l)(2) of this AD, for related information.

(1) Bombardier Service Bulletin 605-24-005, dated January 31, 2011.

(2) Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011.

Issued in Renton, Washington, on February 7, 2012.

Ali Bahrami,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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